UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,400	08/11/2000	Venkataraman Ramanathan	204861	7300

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EXAMINER
EL CHANTI, HUSSEIN A

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/637,400	RAMANATHAN ET AL.
	Examiner	Art Unit	
	Hussein A El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or.extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 November 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

1.   This action is responsive to amendment received on Nov. 15, 2004. Claims 1-23

are pending examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

2.   Claims 22 and 23 are rejected under 35 U.S.C. 101 because both claims do not

have any practical use. The claims only list a set of instructions that are saved on a

computer readable medium with no function or use.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 5, 6, 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

The set of instructions listed in the above mentioned claims do not appear to

have a data structure format as commonly known by one of the ordinary skill in the art.

Claims 5, 6, 15 and 16 are dependent on claim 1 which is a method claim.

Claims 5, 6, 15 and 16 do not teach a method or a step in a method and therefore does

not further limit the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Coile et al, U.S. Patent No. 6,298,380 (referred to hereafter as Coile).

As to claims 1, 11, and 18, Coile discloses a system and method for improving

resource utilization in a TCP/IP connection management system that teaches:

- closing a TCP/IP connection to create a timed-wait state (see col. 13 lines 50-

62)

- excluding information from the TCB not required to identify the client connection

to form a timed-wait state TCB for a time wait period (see col. 13 lines 15-col. 14

lines 18); and

-              releasing of memory containing the information required to service the

client connection (see col. 15 lines 61-col. 16 lines 17).

Coile does not explicitly teach a timed wait. However Coile teaches a method

where the connection waits until the client has acknowledged all the received packets

(see col. 13). It would have been obvious for one of the ordinary skill in the art at the

time of the invention to modify Coile by using a timed wait because doing so would

result in the same function which is to wait until all the received packets were

acknowledged by the client.

As to claims 2, 12, and 19 Coile further teaches the step of excluding comprises the step of copying the information required to identify the client connection to form the TWTCB (see col. 13 lines 35-col. 14 lines 18).

As to claim 3 and 20, Coile further teaches releasing the memory includes the step of releasing the TCB required to identify the client connection (see col. 15 lines 61-col. 16 lines 17).

As to claim 4, Coile further teaches maintaining a minimum of information necessary to avoid late-routed packets forming new connections on the server (see col. 15 lines 61-col. 16 lines 17).

As to claims 5-10, 13-16 and 21, Coile et al further teaches excluding information not required to identify the client connection comprises the step of forming a TWTCB that occupies less memory than the, TCB (column 9, lines 5-12). The smaller connection object described by Coile et al is equivalent to the TIMED WAIT transmission control blocks described by the claims, and could be coded as described by claims 5, 6, 15, 16, 22, or 23 by anyone of ordinary skill in the art. These coded structures yield the smaller sized TWTCBs claimed in claims 8, 9, 10, 13, 14, and 21, as described in the specification. Therefore, these TWTCBs fall within the scope of Coile et al's smaller connection object.

As to claim 17, Coile teaches the method of claim 11 wherein the step of forming a TWTCB comprises the step of copying a portion of the information of the TCB, the portion of information being insufficient to service the TCP/IP connection (see col. 13 lines 15-col. 14 lines 18).

Response to Arguments

5.   Applicant's arguments filed have been fully considered but they are not

persuasive.

In the remarks, the applicant argues in substance that; A) Claims 22 and 23

qualify as an article of manufacture since the claims include a data structure stored on a

computer readable medium and therefore meet the 101 requirements B) claims 5, 6, 15

and 16 further limits claims 1 and 11 by presenting the data structure recited in claim 5

C) Coile's teaching of waiting until all the acknowledgments of the packets has been

received do not have the same functionality of a timed wait D0 Coile does not disclose

closing a TCP/IP connection.

In response to A) The definition of "data structure" is "a physical or logical

relationship among data elements, designed to support specific data manipulation

functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308

(5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music,

literary works and a compilation or mere arrangement of data. A claimed computer-

readable medium encoded with a data structure defines structural and functional

interrelationships between the data structure and the computer software and hardware

components which permit the data structure's functionality to be realized

With respect to claims 22 and 23, the data presented in the claims do not appear

to define any structural and functional interrelationships between the data structure and

other claimed aspects of the invention which permit the data structure's functionality to

be realized. Therefore the material enclosed in claims 22 and 23 are considered to be

nonfunctional descriptive material. When nonfunctional descriptive material is recorded

on some computer-readable medium, it is not statutory since no requisite functionality is

present to satisfy the practical application requirement. Merely claiming nonfunctional

descriptive material stored in a computer-readable medium does not make it statutory.

Such a result would exalt form over substance. In re Sarkar, 588 F.2d 1330, 1333, 200

USPQ 132, 137 (CCPA 1978)

In response to B) In light of the reasoning presented above, the limitations

presented in claims 5, 6, 15 and 16 have similar descriptive material and similarly for

the same reasoning used for claims 22 and 23; claims 5, 6, 15 and 16 do not have a

functional use and therefore do not further limit claims 1 and 11 respectively.

In response to C) Coile teaches a method and system where the proxy

participating application stops sending or acknowledging new data but continues to

acknowledge old data. In a step 604, the proxy participating application sends a

acknowledgment acknowledging the last bit of data received before the application

determined to unproxy. The proxy then waits until all data that it has sent to the client

and the server has been acknowledged by the client and the server (see col. 12 lines

38- col. 13 lines 48). There is no limitation on how the time wait period is being specified

i.e. the wait time is a time interval being set by the server or the client and therefore

Coile's wait until all the packets are acknowledged meets the scope of the claimed

limitation "timed wait state TCB).

In response to D) Coile teaches a method and system where the connection can

be fully where the proxy 104 terminates a separate connection to both the client and the

server and the proxy application relays data received via the two connections from one

side to the other. The client connection stack and the server connection stack are

implemented in the kernel of the proxy. Coile also teaches the invention is implemented

by first fully proxying a connection. Once the connection has reached a certain state

where certain unproxy criteria are met, the connection is unproxied and the need to

maintain the client and server TCP connections is eliminated (see col. 7 lines 46-60)

and therefore Coile's terminating the connections between the server and the client

meets the scope of the claimed limitation " closing a TCP/IP connection".

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.
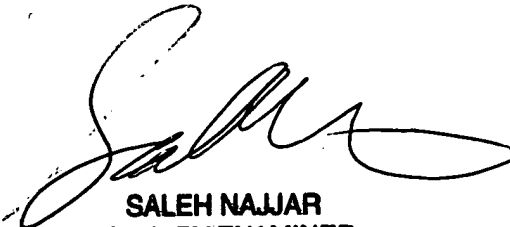
7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hussein A El-chanti whose telephone number is

(571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

March 3, 2005

SALEH NAJJAR
PRIMARY EXAMINER